FULL SAIL UNIVERSITY.

PROGRAMMING FOR WEB APPLICATIONS
PWA-I COURSE SYLLABUS

HOME DEPARTMENT

WDDBS Web Design and Development – Bachelor of Science

COURSE NAME

Programming for Web Applications I (PWA-I)

CONTACT INFORMATION

Catalog Course Code:	WDD 244
Three-Letter Course Abbreviation:	PWA-1
Instructor:	Fialishia O'Loughlin (online)
Telephone:	(786) 505-2904 - Alternate: 407.679.0100 ext. 3276
Email:	foloughlin@fullsail.com
iChat/AIM:	foloughlin@fullsail.com
Hours:	Tuesdays @ 9:00 pm EST (GotoMeeting.com) --or by Appointment

COURSE DESCRIPTION

The Programming for Web Applications I course trains students in the technologies used to create dynamic content for the web using client-side programming. This course builds upon the coding and logic concepts learned in the Web Programming Fundamentals course, continuing the use of JavaScript. Students will also be shown more advanced concepts, such as data structures and key algorithms.

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COURSE MATERIALS

- Laptop with approved code editor software

- Online Class Files & Downloads available Full Sail Portal under "<u>References</u>" tab

COURSE OBJECTIVES

Through the various components of study and application, students will realize these objectives by completing the following milestones:

- **Control Structures**
    - Demonstrating problem solving techniques by branching code using conditional logic
    - Utilizing nested if and switch statements
    - Understanding the ternary operator
    - Creating loops to iterate through elements of an array or properties of an object
    - Understanding the differences between while and for loops

- **Data Structures**
    - Recognizing the different types of data structures such as objects and arrays
    - Modify contents of an array object via array access notation and array methods
    - Creating and manipulating object literals and constructor objects
    - Sorting and extrapolating data within objects and arrays
    - Understanding efficient implementation & Working with object prototypes

- **JavaScript and HTML**
    - Controlling HTML (Add, Update, Remove HTML elements)
    - Displaying dynamic content; Working with forms and Events
    - Understand closure and scope levels
    - Create an interactive custom library & creating and Parsing JSON

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COURSE OUTCOMES

Upon successful completion of this course, students will be able to:

- Manipulate web browser DOM (Document Object Model) elements
- Enhance HTML forms with client-side functionality and validation
- Create data visualization with the canvas API
- Be able to read error codes and interpret their messages

GENERAL EDUCATION COMPONENT

Course is designed to teach students the necessary knowledge and skills to be successful in their lives, their education, and their work, additionally to teach them scripting language by creating a fast past interactive development environment. Students will be required to submit written assignments and take practical exams. Students will also be asked to answer questions in class and take part of the teaching process in-group assignments. Course also encourages students and awards those who attend educational events.

DEGREE CONNECTION

Programming for Web Applications 1 is a continuation of the Interactive Programming courses. This course is designed to teach students new techniques to better their client side programming and prepare them for the advanced client-side programming concepts in the second Programming For Web Applications course.

INDUSTRY CONNECTION

JavaScript skills are a must for modern web development. Knowing JavaScript well is probably one of the most challenging and rewarding things student can do as a web programmer. It is an incredibly diverse language, much larger in application than what it was known for 10 years ago. There are a large number new APIs, and it is in constant development. When people talk about HTML5, they are talking mostly about JavaScript.

RESEARCH COMPONENT

In this course most of the work is graded on student's research for new ideas and their creativity to use these new JavaScript techniques. Students will research topics including:

- New Code Implementations; Code Security
- Recent JavaScript updates; Interacting with other HTML objects.

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ADDITIONAL RESOURCES

Students are encouraged to use mass media and social networking sites to further their research, including:

- Douglas Crockford, http://javascript.crockford.com/javascript.html
- JavaScript Tutorials, http://javascript.internet.com/
- W3Schools, http://www.w3schools.com/

TOPICS COVERED

- Review previous introduction to JavaScript course
- Loops, Conditionals, Objects
- Advanced Object Methodology
- The Document Object Model
- Form validation and regular expressions
- Closure and Scope
- Custom Libraries & Canvas Introduction

LEARNING ACTIVITIES

Course Activities

Throughout the course, students will have several in-class exercises relating to the topic or objective being discussed. These activities are not graded, however, they are graded & expected to be completed/turned-in by students. If not complete, you will lose GPS participation points. Most of the activities are short and direct and contain small amounts of actual code. However, some of the activities build on each other thus it is imperative that students understand the current activity before moving on to the next.

Course Assignments

Students will be developing a wide variety of small-scale projects to validate the knowledge they gained through out this course. Most assignments will focus on the core learning objectives taught in the previous learning material or two and are usually due before start of the following class. This will allow students to have some time at home to complete the assignment if necessary. Although the grade weight of the course assignments is fairly light, understanding and completing them is a crucial part of preparing the students for the written and practical exams

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Practical Examinations

Programming for Web Applications I places a strong emphasis on using practical exams to assess the student's knowledge and understanding of the objectives and is reflected in the overall grade weight of the course. Students will be administered two (2) practical exams. Sometimes unannounced quizzes may be given out if necessary.

FULL SAIL GRADING SCALE & WEIGHTS

The following grading scale will be used to determine your final grade:

A+	**95 – 100**	4.0
A	**90 – 94**	3.5
B+	**85 – 89**	3.0
B	**80 – 84**	2.5
C+	**76 – 79**	2.0
C	**73 – 75**	1.5
D	**70 – 72**	1.0
F	**0 - 69**	0

Activities & Assignments - (100% of total grade)

Exams (2 total)	46%
Assignments/Goals (6 Total)	44%
GPS Professionalism	10% (---Attend Weekly Screen Casts, Do your work, Be Respectful, etc..)

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Assignments & Exam - (90% of total grade)

Goal 1 - The Duel Part I (Graded)	4%	Due Week 1 - (Thursday)	
Goal 1 - The Duel Part II	3%	Due Week 1 - (Thursday)	
Goal 2 - JavaScript Practice	3%	Due Week 1 - (Thursday)	

Goal 3 - Debug	8%	Due Week 2 - (Thursday)	
Goal 4 – The Duel Part III	4%	Due Week 2 - (Thursday)	

Goal 4B – Guessing Game	4%	Due Week 3 - (Thursday)	
Goal 5 – Form Validation	4%	Due Week 3 - (Thursday)	
Post JavaScript Research Topic	2%	Due Week 3 – ("Thursday")	
Goal 6 - Midterm Exam	**25%**	**Due Week 3 – ("Saturday")**	

Goal 7 – Advanced Objects Overview	4%	Due Week 4 – ("Thursday")	
JavaScript Research (Pick an Advanced Topic)	4%	Due Week 4 – (Thursday)	
End of Course Survey *(Extra Credit Only)*		Due Week 4 – (Thursday)	
Goal 11 - Final Exam	**25%**	**Due Week 4 – ("Saturday")**	

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Professionalism grade (10% of total grade)

Easy... During Week #1, just submit an iChat to your instructor and introduce yourself to classmates. During ALL weeks, just be sure turn your assignments in on-time, stay in touch, be professional, and this should be an easy 10%. Also note that watching GoToTraining.com Archives is REQUIRED (see below) & posting a weekly summary is also tied to your Professionalism grade.

WEEKLY "LIVE" SCREEN CAST SESSIONS
GO TO TRAINING

This course uses the GoToMeeting/Training platform as a chance to gather and have interactive discussion. Each live session will clarify and set expectations for future activities, provide context for the skills you're learning, and answer questions that might be easier to do interactively than over chat or email. **Live sessions in this course are optional, with <u>one exception</u>...** IF you decide to NOT attend, you will need to:

- Review the archived/recorded session + Post a <u>50-word summary</u> of what you learned on the Discussion Board for the corresponding GoToMeeting/Training session.

- You will earn **1%** towards your Professionalism grade if you attend. OR, you can earn your **1%** by watching the archived session & post your summary on the Discussion Board. To participate in the session, please use your microphone and speakers (VoIP) - a headset is recommended. Or, call in using your telephone & don't be shy!

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HOMEWORK SUBMISSIONS:

You will need to read & follow the grading rubrics & directions given for each "graded" assignment, however, here are a few guidelines to get you start…

- For the first 2 weeks of class, please upload your graded assignments to **FSO & GitHub.com** (used in WPF)
- Please make sure your archive (as a ZIP file) all homework for FSO & include all necessary files.

LATE POLICY:

- Visit the "References" Section of FSO to read the official **WDDBS Late Policy**. You can also view it by visiting http://wddbs.com/policy/latework.pdf

- Make-up assignment will be allowed in cases of well-documented student emergencies ONLY. For student emergencies, it is the student's responsibility to contact the instructor and provide documentation AHEAD OF TIME ----or ----within one week of each due date (unless special arrangements have been made previously).

- If you are going to miss a few days of class, you (or a family member) must notify the instructor either by email or phone prior to the absence--- if at all possible. Failure to notify the instructor in advance may result in you not being allowed to make-up any missed assignments or exams.

- All LATE & UNEXCUSED work will automatically result in a 25% reduction of points earned for each day that you are late. You may also lose GPS points;

ACADEMIC HONESTY:

Each student is required to follow Full Sail University policy regarding academic honesty. All work submitted by students is expected to be the result of the student's individual thoughts, research, and self-expression unless the assignment specifically states "group project." Any act of academic dishonesty will be handled in accordance with Full Sail University policy.

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STRATEGIES FOR SUCCESSFUL LEARNING

- Learning through repetition and struggle is **normal**. Coding & trouble-shooting errors for some will not come easy, so perseverance is key. Don't give up!

- Do not get frustrated when error messages or bugs occur in your program. They occur to everyone even the most experienced. Stay focused and code in a modular fashion. Complete one thing at a time!

- Don't be afraid to ask questions. Send me an iChat or use the "ASK THE INSTRUCTOR" link within FSO.

- Visit the "References" Tab on FSO to download these files so that you can GET & STAY ORGANIZED…

    o   Review the **Course Syllabus** to start getting organized;

    o   Review the **Weekly Calendar** to STAY ON TRACK;

    o   Review all **Course-Specific Rubrics** to know what's expected of each assignment;

INSTRUCTOR INSIGHTS

- My greatest desire is that all of you succeed in this class, however, one thing to remember about homework is ----ask questions & don't get behind. Again, the importance of doing your homework cannot be stressed enough.

- Logging into the Full Sail Portal is NOT sufficient enough to obtain a good grade. For each week of class, your grade will be determined by completion of your JavaScript assignments & exercises (submitted via FSO and/or GitHub.com when required) and participation in discussions for that week's class.

- You cannot understand the topics presented without making time for careful and timely study sessions. If you are having difficulty, by all means please contact me. The best way to contact me is via iChat or E-mail, as listed on this syllabus: foloughlin@fullsail.com. You can also contact me via phone using the contact info listed at the beginning of this document.

- Have fun & I look forward to programming with you over the next 4 weeks!

DISCLAIMER: This syllabus may be altered, at the instructor's discretion, during the course of the term. It is the responsibility of the student to make any adjustments as announced.